PROJECT MANAGEMENT PLAN
FOR
PHILPOTT LAKE, VIRGINIA
(SECTION 216)
FEASIBILITY STUDY

Philpott Dam Smith River Virginia

US Army Corps of Engineers®
Wilmington District

NOVEMBER 2006

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PREPARED BY:

US ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

THE COMMONWEALTH OF VIRGINIA

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Introduction

The feasibility study, authorized under Section 216 of Public Law (PL) 91-611, the River and Harbor and Flood Control Act of 1970, as amended, will review the operation of the Philpott Dam and Lake and report recommendations to Congress on the advisability of modifying the structures or the structures' operation and for improving the quality of the environment in the overall public interest. Information developed during the feasibility study may become the basis for actions specifically authorized by Congress or by the legislature of the Sponsor, the Commonwealth of Virginia; for actions under the continuing authorities of the US Army Corps of Engineers; and/or for actions by non-government organizations. The study provides interested parties an opportunity to integrate multiple perspectives and assets to achieve the common goal. The parties commit to effective and efficient management of their responsibilities for the study, and to the sharing of information about the study.

Approval of participation in this feasibility study by the US Army Corps of Engineers, Wilmington District, was based on the report entitled 905(b) Reconnaissance Report, Philpott Dam and Lake, Virginia, (Section 216) Study, Smith River dated August 2004, approved 7 January 2005. This document indicates that the feasibility study will address concerns identified in the 28 letters of comment received in response to the 8 December 2003, Scoping Letter. More than 145 comments were identified and placed into 18 pre-determined problem categories. Comments were received for 15 of the 18 categories. The areas of most concern based on comments received are: natural resources; downstream fisheries management related to the brown trout fishery, water quality, the Philpott guide curve and its effects on various resources, and upstream fisheries related to the largemouth bass fishery in Philpott Lake. Hydropower and upstream recreation were topics addressed in several comment letters. Downstream water supply, recreation, erosion and siltation, drought management, fish and wildlife, endangered species, cultural resources, and shoreline management are of concern; however; very few comments were submitted regarding these concerns. There were no comments received regarding flood control, upstream water supply, or aesthetic resources. The feasibility study will address each of the 18 identified problem categories. US Army Corps of Engineers Regulation (ER) 1105-2-100, Planning Guidance Notebook, provides full guidance regarding conduct of the study.

Location of Study, Non-Federal Sponsor and Congressional Districts

Philpott Lake, which takes its name from the nearby downstream village in Henry County, Virginia, is located in western Virginia on the Smith River, Virginia, 44.3 miles above its junction with the Dan River near Eden, North Carolina, and 35 miles from the Virginia-North Carolina State line. At spillway elevation, the reservoir extends upstream about 16 miles. The overall project covers 10,000 acres in Franklin, Henry, and Patrick Counties in Virginia.

The non-Federal sponsor for the feasibility phase of the study is the Commonwealth of Virginia. The Virginia point of contact for this study is the Bud Laroche, Regional Fisheries Manager, Virginia Department of Game and Inland Fisheries.

Philpott Lake is located in Virginia's 5th Congressional District, represented by Congressman Virgil H. Goode, and Virginia's 9th Congressional District, represented by Congressman Rick Boucher.

Construction of Philpott Lake was authorized by the Flood Control Act (FCA) of 1944 (PL 78-534) as part of the development plan of the Roanoke River Basin, Virginia and North Carolina. The original primary authorized purposes for construction of Philpott were flood control and generation of hydroelectric power. Construction began in 1948 and flood control was provided in 1951. The project went into full operation in 1953, when all three generators in the powerhouse were completed. Project purposes also include: recreation and low flow augmentation, which were also authorized by PL 78-534 Additional project purposes were added by general legislation; water supply was added pursuant to the Water Supply Act of 1958 (PL 85-500) and fish/wildlife was added by the Fish and Wildlife Coordination Act (PL 85-624). The development of public recreation facilities was authorized by PL 78-534, Section 4 of the FCA of 1946 (PL 79-526), Section 209 of the FCA of 1954 (PL83-566) Section 207 of the River and Harbor Act (RHA) of 1962 (PL87-874) and by the Water Conservation Fund Act of 1965 (PL 88-878). Philpott Lake contains conservation pool storage between elevations 920 and 974 feet mean sea level (msl). The conservation pool is reserved for power generation and low flow augmentation. Potential water supply reallocation of storage is limited to 15 percent of the total conservation pool or 40,000 acre feet which ever is less. At Philpott Lake 15% percent of the conservation pool s less and is the controlling factor. Philpott Lake has an area of 2,880 acres at the top of the conservation pool. One of the primary purposes of Philpott Lake is controlled flood storage, provided between elevations 974 and 985 feet, msl. Surcharge, or uncontrolled flood storage is provided above the crest of the spillway, elevation 985 feet, msl. Philpott Dam is a concrete gravity dam, with a crest elevation of 1016 feet, msl and a length of 920 feet.

The Phases of the Study

The feasibility study will be prepared in three phases. The first phase details the plan for the feasibility study to the first major decision point, the first In-Progress Review (IPR). In the first phase of the study, existing data about the study subjects will be gathered, and recommendations for further study will be developed. As the study progresses, the PMP will be modified to detail the plans for phases II and III. The Sponsor may request changes in the PMP maybe agreed to between the cost share sponsors and made by the made by the U.S. Army Corps of Engineers (USACE), Wilmington District.

Upon completion of Tasks in phase I and prior to the initiation of the technical studies and data collection in phase II, an IPR with senior USACE representatives, the study sponsor, and resource agency representatives will be conducted. The objective of this IPR will be to assure that all work products produced during phase II will be subjected to vigorous quality assurance and quality control procedures. The quality control and assurance procedures not only should address the technical quality of products produced but also set the standards for quality and applicability of products for inclusion in the feasibility study, based on requirements of the Planning Guidance Notebook and the U.S. Water Resources Council's *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies*.

In phase II of the study, multiple technical studies addressing identified objectives, will be performed to develop specific, quantitative, and qualitative goals and to assess existing problems, needs, and opportunities. Addressing identified objectives in phase II via data collection, modeling, and analysis will set the stage for formulation, evaluation and selection of plans in phase III. Independent Technical Review (ITR) will be performed on phase II products by the appropriate technical specialists to assure technical and scientific accuracy.

In phase III of the study, alternatives will be developed and evaluated to meet the goals and objectives identified in phase II. Outputs and impacts of each alternative will be determined, trade-off analysis performed, and, if appropriate, actions selected for recommendation to Congress. An integrated feasibility report and National Environmental Policy Act (NEPA) document will be prepared. The feasibility report and NEPA document will be subjected to independent technical review (ITR) and peer review.

Within phase I, the PMP requires the following tasks for each technical workgroup.

- Gather and evaluate existing relevant data.
- Identify gaps in the existing relevant data.
- Develop recommendations to fill gaps in the existing relevant data.
- Identify and evaluate existing methods and tools for study of the subject.
- Develop a plan to keep models and data available to the public and in compatible formats.
- Develop an approach for combining individual models and investigations into an overall system evaluation.
- Develop scopes of work to collect data for the identified study subjects.

For each study subject, adequate information will be developed in phase I to produce scopes of work which will allow the cost share partners to determine what additional investigation may be needed. Documentation and evaluation of existing data and study methods will be produced for use by the sponsor and USACE regardless of whether or not it becomes incorporated as a study subject in the feasibility study.

The detailed focus and scope of the entire feasibility study will become more focused and clear a phase I and phase II technical studies are completed. All investigations performed for the study will, at a minimum, comply with legal obligations and administration policy and will not compromise professional standards. This will allow all results of the study, even parts not receiving detailed analysis, to be of use and value to the Sponsor and USACE. Requirements exceeding these minimum standards will be negotiated by the sponsor and the USACE, based on value of the data for decision making, complexity, available resources, and associated risks.

Communication and Decision-making Processes

Communication and the decision making process used to conduct this study will follow the guidelines found in the Wilmington District's *Standard Operating Procedure Project Delivery Team Meetings* found at Attachment 7. The Project Delivery Team (PDT) is committing to: (1) the detailed task outline described below; (2) full and open communication; and (3) identifying concerns and resolving associated problems or disagreements. Resolutions shall be reached through discussion among PDT members. Issues unable to be resolved at the PDT level will be elevated through the Lead Planner and to the Project Manager to the appropriate technical supervisor and will be resolved at the lowest level possible and as early as possible. Ultimate resolution of issues shall be the responsibility of the Executive Committee. The Philpott Lake Section 216 study Executive Committee is tasked with ensuring consistent and effective communication. The following individuals are designated to serve on the Executive Committee: Jeff Corbin, Assistant Secretary, Virginia Department of Natural Resources and Christine M. Brayman, Deputy District Engineer for Programs and Project Management of the Wilmington District Corps of Engineers. The Executive Committee will generally oversee the study, and consistent with this PMP will make recommendations to the District Engineer, including suggestions to avoid potential sources of dispute. The Executive Committee will meet quarterly or as needed until the end of the study period.

Examples of matters that may be discussed in these quarterly meetings include coordination of USACE's requests for funds consistent with the funding cycles of the Sponsor, the Sponsor's potential need to suspend the study due to lack of funding, identification of work which the Sponsor may propose for negotiation as work in-kind, prioritization of work tasks, review and approval of study related documents, study status and study schedule. Executive Committee meetings may be in-person, telephone conferences, or other means determined appropriate by its members.

USACE and the Sponsor commit to appointing individuals to the PDT with sufficient authority to act for them, to ensure constant representation is available during established time periods for these processes. Frequent communication among study partners is strongly encouraged to insure all potential study problems are discussed in a timely manner. The Project Delivery Team will inform the Executive Committee of significant pending issues and actions and will prepare written reports, as needed. These reports will document the progress of the study and will be submitted to the Executive Committee. Study expenditures will be reported, as needed or as requested by the Executive Committee.

To ensure timely completion of the Philpott Feasibility Study, members of the Executive Committee or the Project Delivery Team and subject matter specialists may request immediate discussion of any arising issues affecting the study.

Upon the conclusion of phase, I the PDT will prepare and present recommendations for phase II to the Executive Committee. Recommendations from the PDT will include proposed scope of works which will define tasks, costs, methods of accomplishment, and cost sharing requirements. Specific work items and specific products developed during phase II may be produced using various methods of accomplishments including: (1) USACE, Wilmington, in-house assets; (2) USACE, Wilmington, private contractors; (3) other USACE assets; (4) other Federal assets; (5) Virginia in-house assets; and (6) Virginia private contractors. All work products produced during phase II must be subjected to vigorous quality assurance and quality control procedures. Quality control and assurance procedures should be developed which will address the technical quality of products and address issues of how usable a product will be in the production of the integrated feasibility report and NEPA document.

The Executive Committee will present the final recommendation to the USACE, Wilmington District Commander. Each phase of the study will undergo this uniform approach for development and presentation. Prior to issuance of any contract under the study FCSA, the party issuing the order shall allow other involved parties a minimum of ten working days to review the proposed contract. Proposals for contract award will be available for evaluation by interested and involved parties to the extent required as defined by all applicable laws and regulations.

Public Involvement, Collaboration, and Coordination with Other Agencies

As established by USACE ER 1105-2-100, Planning Guidance Notebook, Appendix B, the feasibility study will document substantial active involvement by interested government and non-governmental agencies and organizations. Public involvement is essential to obtain study information and citizen concerns. The PDT will ensure their comments and concerns receive full consideration in the planning process.

During phase I formal coordination between USACE and other agencies is not anticipated. . However, during phase I, subject matter specialists will be consulted regarding the study subjects. Other steps facilitating public involvement will be developed for phases II and phase III.

For each of the 18 study subject Tasks in the PMP for phase I, subject matter experts are identified, including USACE employees, the Sponsor, and employees or representatives of other government and non-government organizations, and businesses. The subject matter experts will be consulted for information and advice during the performance of each task.

Phase 1 - Task 1: Shoreline Management and Erosion

This task contains a number of useful items. However this Section 216 study is focused on operation of and water releases from a completed multipurpose project. Impacts of alternative plans on shoreline management and erosion will be evaluated during phase III. However, this task does not offer opportunities for consideration as additional study purposes and as a result a separate study work group and phase II technical studies are not needed.

Phase 1 - Task 2: Natural and Cultural Resources

Task Funding Priority: A funding priority has not yet been established for phase I tasks.

Phase 1 - Task 2A. Determine how potential changes in reservoir operation could affect the existing natural resources of Philpott Lake and the Smith River. Philpott Lake and the Smith River are significant natural resource assets. Any permanent change in reservoir operation must be considered in light of its potential effects upon natural resources of the lake and downstream waters.

Phase 1 – Task 2.A.1 - Task 2.A.3: Subject Matter Specialists.

- Sport Fisheries Groups
  - Blue Ridge Chapter Trout Unlimited
  - Fly Fishers of Virginia
  - Smith River Chapter Trout Unlimited
- Franklin County
- Henry County
- U.S. Fish and Wildlife Service
- Natural Resource Conservation Service
- North Carolina Wildlife Resources Commission
- Patrick County
- USACE, Wilmington
- Virginia Department of Conservation and Recreation
- Virginia Department of Environmental Quality, West Central Regional Office
- Virginia Department of Historic Resources
- Virginia Polytechnic and State University

Phase 1 - Task 2.A.1 - Endangered Species Restoration. Evaluate potential changes in reservoir operations including flow and temperature management options for Philpott Dam and channel restoration activities below the dam specifically for the Federally listed endangered Roanoke logperch (*Percina rex)* in the Smith River below Philpott Dam. A survey is currently underway to determine the presence of Roanoke logperch and/or logperch habitat on portions of the Smith River and other tributaries to Philpott Lake above the normal pool elevation, within the USACE property boundary. If fish or suitable habitat is found; evaluate how any changes in operation of the dam may impact habitat for and/or occurrence of the Roanoke logperch in the Smith River or other tributaries upstream of Philpott Lake.

METHODS: The Smith River above and below Philpott Dam supports a population of the Federally listed, endangered Roanoke logperch. Logperch are present at low abundance. The normal population abundance levels are not known. Results of the survey for presence of Roanoke logperch and potential habitat upstream of the lake will be incorporated into this process. The effects of the operation of Philpott Dam and potential management actions including adjustments to operation of Philpott Dam will be assessed. Potential management actions for Roanoke logperch in the Smith River below Philpott Dam include channel restoration and flow and temperature management of releases from the dam. Potential actions for possible upstream populations on Government property would be determined. These actions will require Section 7 consultation between the U. S. Fish and Wildlife Service, Department of Game and Inland Fisheries, and the U. S. Army Corps of Engineers.

Task 2.A.2 - Habitat Management. Assess opportunities for channel restoration, using natural channel design principles in the Smith River below Philpott Dam. While suitability of habitat management actions under Section 216 will be assessed, opportunities for adjacent, aquatic ecosystem habitat management activities suitable for other funding authorities such as Section 206 will also be noted. Channel design could include narrowing and deepening the channel, boulder addition, restoring floodplain contours, increased sinuosity, and adding near stream woody vegetation to shade the channel and protect stream banks from erosion. Channel design immediately below the dam could include addition of gravel and cobble materials to improve the conditions for invertebrate production if peaking flows were reduced. Channel restoration may require modifications in the timing and magnitude of the releases from Philpott Dam.

The current stream channel in the Smith River below Philpott Dam is affected by highly regulated releases from Philpott Dam. Flood management has eliminated flood flows in the Smith River. The highest flow is the peak generation flow, which usually occurs daily. Between generation releases, the water surface is shallow and slow moving; this causes more rapid warming of the water. Channel restoration, using natural channel design principles, will be used in the Smith River below Philpott Dam to enhance bed load transport, stabilize banks and floodplains, and increase habitat suitability.

METHODS. Contact subject matter experts and other appropriate parties to develop an inventory of available data by type, including: hydrologic, channel geometric, hydraulic, sediment, land use, and bank erosion. Critical aquatic habitat will be identified. Data will be consolidated and evaluated for its usefulness in the Philpott Dam and Lake Section 216 study. Data will be provided within a GIS.

Collaborate with subject experts for natural river design using data on channel morphology measurements, discharge and stage data, river critical aquatic habitats, and GIS database information. Determine river restoration options and locations appropriate to this Section 216 study. Evaluate potential benefits for each alternative. Develop a benefit to costs decision matrix.

Influences of Fluctuating Releases on Stream Fishes in the Smith River below Philpott Dam, Report to Virginia Department of Game and Inland Fisheries by Donald J. Orth et al., December 2004 contains a significant amount of information on the non-native brown trout fishery, invertebrates and other species downstream of the Philpott Dam. It is thought that the data maybe sufficient for phase III evaluations of impacts on the brown trout fishery and habitat and that no addition studies will be required. Hydrodynamic models could be used in the channel design process to assess habitat management opportunities during generation flows and non-generation flows.

Task 2.A.3.a - Temperature Management: Assess opportunities for habitat improvement for natural resources including brown trout and native fish and invertebrates in the Smith River below Philpott Dam by managing the temperature regime in the Smith River below Philpott Dam.

METHODS: The temperature regime in the Smith River could be managed to increase the length of tailwater with suitable temperature for brown trout and native fishes and invertebrates. Currently the average release temperature (8°C) is below the optimal brown trout growth range (12-19°C). Warmer releases could benefit the brown trout habitat and increase the area of suitable thermal habitat for warm water species, including the Roanoke logperch. Achieving warmer releases could be accomplished by several means, including structural modifications to the water intakes or nonstructural

modifications such as changes in magnitude and schedule of releases from Philpott Dam. Each potential scenario would be evaluated for habitat effects and for costs. Evaluate the bioenergetics constraints on brown trout, native fishes, and invertebrates under proposed temperature regimes.

Task 2.A.3.b Flow Management: Assess opportunities for habitat improvement for natural resources including brown trout and native fish and invertebrates in the Smith River below Philpott Dam by managing the flows from Philpott Dam.

METHODS: Current base flow appears to be below the optimal reservoir release range (9-15 cubic meters per second), while the peak flow is too high to support suitable brown trout spawning environment. A 12 cubic meter per second reservoir release scenario predicted the best suitable habitat availability in our study site. The highly fluctuating flow causes temporal changes in the locations of suitable habitat.

Management of flows for habitat improvement could vary with seasonal life cycle requirements for various species. For example brown trout spawning is predictable based on daily temperatures. Peaking flows could be restricted during the time of peak spawning, incubation, and emergence to maximize recruitment success.

Another potential flow management technique which could be evaluated is stepped releases. The rapid increase in flows during generation causes substantial increase in the shear stresses on the channel bed. A two-step flow release may reduce the shear stress acting on gravel and drag force exerted on fish without affecting power generation requirements.

Achieving flows that are beneficial to habitat for trout, native fishes and invertebrates releases could be accomplished by several means including structural modifications to the water intakes or nonstructural modifications such as changes in magnitude and schedule of releases from Philpott Dam. Each potential scenario would be evaluated for habitat effects and for costs.

Phase I - Task 3: **Operating Policies and Administrative Procedures.**

The Philpott Dam Powerhouse is remotely operated using the Supervisory Control and Data Acquisition (SCADA) system located at the John H. Kerr Powerhouse. The hydrologic operation and determination of weekly hydropower to be generated follows the guidance in the June 1992 Water Control Plan for Philpott Lake and the September 1992 Water Control Plan for John H. Kerr Reservoir. Operating Policies and Administrative Procedures for John H. Kerr are currently being reviewed pursuant to the John H. Kerr Dam and Reservoir, Virginia and North Carolina, (Section 216) Feasibility Study, which is slightly ahead of the current schedule for the Philpott Lake (Section 216) Study. As John H. Kerr and Philpott are operated hydrologically in tandem, a careful review should be made of the work being undertaken for John H. Kerr to determine and address any cross impacts and conflicts to Congressionally authorized purposes at Philpott Dam and to assure that all Philpott concerns are addressed, documented, and resolved during the completion of the John H. Kerr effort. As such, it is recommended that the output from the Operating Policies and Administrative Procedures review undertaken for the John H. Kerr 216 study be utilized for the Philpott 216 study.

Phase I - Task 4: Water Quality

Phase I - Task 4.A: **- Water Quality Downstream of Philpott Dam**: The flow regime resulting from the operational practices of the Philpott dam is an important driver of water quality in the Smith River. Historically, the Smith River below Philpott Dam had events of high conductivity and discolored water, indicating problems from a point source upstream. These problems extend into North Carolina, driven as surges by the peaking power flows, into North Carolina waters. The source of these problems was the Town of Martinsville, Virginia's WWTP. The plant received wastewater from several textile mills and, until the mid-1990s, was not able to adequately treat it. The quality of the discharge from Martinsville's WWTP has improved drastically since 1997. There were few permit violations in 1998 and 1999. Recently, one of the larger mills discontinued operation in the Smith River watershed, and the WWTP discharge is expected to continue to improve.

Management of flows from Philpott, changes in magnitude and schedule of releases from Philpott Dam, could provide system water quality benefits as well as benefits to habitat and fish populations. This task should provide information regarding the water quality resource component to be considered in the analysis which will balance environmental, economic, and recreational goals. Improving water quality conditions in the Smith River below Philpott likely hinges on mitigating the effects of fluctuating releases from Philpott Dam through a combination of flow management strategies. Improving water quality will also require a collaboration of several federal, state, and local groups and programs.

Phase I - Task 4.A.1-Task 4.B.3 Subject Matter Specialist

- City of Danville
- City of Martinsville
- Franklin County
- Henry County
- North Carolina Division of Water Quality
- Patrick County
- USACE, Wilmington
- Virginia Department of Environmental Quality, Office of Environmental Review
- Virginia Department of Environmental Quality, Waste Division
- Virginia Department of Environmental Quality, Water Division
- Virginia Department of Environmental Quality, West Central Regional Office
- Virginia Department of Health
- Virginia Department of Game and Inland Fisheries

Phase I - Task 4.A.1 - Evaluate Adequacy of Existing Water Quality Data and Prepare Recommendations for Further Data Collection as Needed: Evaluate water quality conditions including concentrations and effects of pollutants naturally present, pollutants from fixed sources, non-point source pollutants in the Smith River below Philpott Dam. Identify non-attainment areas and areas considered as present or future problems by stakeholders. Consult with Sponsors and decide what data will be needed to provide an adequate description and discussion of water quality issues.

METHODS: Conduct a literature review and communicate with local water quality experts to identify existing water quality data. Acquire best available data, analyze for adequacy, and identify data gaps. Document locations and reasons for any impaired river segments. Consult with Sponsors and decide what data will be needed to provide an

adequate description and discussion of water quality issues. Review data needs for adequacy for modeling to predict water quality conditions in the river under various flow, temperature, and duration scenarios.

Phase 1 Task 4.A.2: Prepare Scope of Work for Collection of Additional Water Quality Data as Needed. Based on the review of available water quality information and the identification of study needs, prepare a scope of work for the collection of required additional water quality data.

METHODS: Communicate with water quality experts, other technical workgroup members, and hydrologic modelers to develop an accurate list of tasks and associated costs. Data collected needs to be in appropriate areas and adequate to support predictive modeling of water quality conditions under various flow, temperature, and duration scenarios.

Phase I - Task 4.A.3: Evaluate Application of Water Quality Models Related to River Flow Modifications to Smith River. Hydrologic models can provide a predictive tool to evaluate flow management scenarios. Previous attempts to apply water quality models to the Smith River have not been fully successful. The highly regulated flow regimes in the Smith River were problematic for the models. A current assessment of the use of this predictive tool for the Smith River will be performed.

METHODS: Confer with Virginia Department of Environmental Quality (VADEQ), United States Geological Survey (USGS), USACE, Engineering Research Design Center (ERDC), and other subject matter specialist to review previous applications of hydrologic models to the Smith River and currently available applications. Determine if models are available that would be useful in evaluating flow scenarios and predicting water quality effects.

Phase I - Task 4.A.4: Prepare Scope for Development or Revision of Water Quality Models for the Smith River Below Philpott.

> **METHODS:** Meet with VADEQ, USGS, CESAW, ERDC and other Subject Matter Specialists to develop an accurate description of tasks and estimated associated costs. Assure that model can be linked to reservoir operations model. Assure that data requirements of other technical workgroup members are considered.

Phase I. Task 4.A.5: **Identify Flow Management Options and Evaluate Water Quality Effects**: Managing flows to benefit water quality and other river resources could be accomplished by several means including structural modifications to the water intakes or nonstructural modifications such as changes in magnitude and schedule of releases from Philpott Dam. Potential scenarios would be evaluated for water quality effects and for costs.

> **METHODS**: The suite of flow management options developed by the technical workgroup will be evaluated for water quality effects using appropriate models or other methods.

Phase I - Task 4.B - Water Quality Within Philpott Reservoir: Determine if changes in reservoir operation could benefit water quality within Philpott Lake and the Smith River. Determine if changes in reservoir operation are necessary to achieve water quality standards or meet project purposes. Consider the effects of changes in reservoir operations on concentrations of water pollutants naturally present, pollutants from fixed sources, non-point source pollutants, and seasonal variations of pollutants.

Phase I - Task 4.B.1: Evaluate Adequacy of Existing Water Quality Data for Philpott Reservoir and Prepare Recommendations for Further Data Collection as Needed.

> **METHODS**: Conduct a literature review and communicate with local water quality experts to identify existing water quality data. Acquire best available data, analyze for adequacy, and identify data gaps. Consult with cost share parties and decide what data will be needed to provide an adequate description and discussion of water quality issues.

Task 4.B.2: Prepare Scope of Work for Collection of Additional Water Quality Data as Needed. Based on the review of available water quality information and the identification of study needs, prepare a scope of work for the collection of additional water quality data as needed.

> **METHODS**: Communicate with water quality experts and other aquatic resource experts to develop an accurate list of tasks and associated costs.

Phase I - Task 4.B.3: Identify Potential Reservoir Operation Project Modifications and Evaluate Effects on Reservoir Water Quality Effect From Implementing Those Actions.

> **METHODS:** The suite of flow management options developed by the technical workgroup will be evaluated for water quality effects using appropriate models or other methods.

Phase I - Task 5: **Water Supply**

Phase 1 - Task 5: Determine the existing and potential future water supply users within the study Area that may be impacted by modifications in operations at Philpott. The items under this task are focused on identifying existing and potential future water supply users in the project area, and evaluating potential impacts to those users throughout the course of the study. There are two areas of interest in this section - potential future water supply users that may request water supply allocation from Philpott Lake; and existing and potential future water supply users downstream of Philpott Lake that may be impacted by operation modifications. Available existing data related to this subject will be gathered. These data will be evaluated for relevance and adequacy for the study of this subject. There is baseline water supply data available for the study area. However, it is expected that additional water supply data will be required to understand potential future water supply demands from Philpott Lake and to evaluate potential impacts to municipal, industrial and agricultural water supply withdrawals below Philpott Lake. If necessary, recommendations for additional data collection will be prepared. Existing methods and tools for analysis and study of this subject will also be identified. A scope to provide additional or revised evaluation methods will be prepared, if necessary.

Phase I - Tasks 5.A and 5.B: Subject Matter Specialists

- City of Martinsville
- City of Danville
- City of Eden
- Henry County
- Patrick County
- Franklin County
- West Piedmont Planning District Commission
- USACE, Wilmington
- Virginia Department of Environmental Quality
- North Carolina Department of Environment and Natural Resources

Phase I - Task 5.A: What are the potential water supply users that may request water supply allocation from Philpott Lake? Currently, approximately 15% of the conservation pool (elevation 920 to 974 feet, mean sea level) in Philpott Lake is allocated to water supply use. However, none of the water supply allocation is dedicated to users. There are currently no contracts in place for use of the water supply volume from Philpott. However, one request for in-lake water supply has been made for 24 million gallons per day (MGD) power generation facility. No assessments or evaluation of the proposed facility's design have been initiated.

Phase I - Task 5.A.1: Evaluate the potential water supply needs. Identify data gaps and prepare recommendations for collection of additional data, as needed.

METHODS: Consult with subject matter specialists to identify Commonwealth of Virginia data, existing or being collected and solicit what data will be needed to adequately define and assess potential demands from the water supply allocation in Philpott Lake. Data would include: type of facility, location, capacity, low flow requirements, owner, and future demands.

Phase I - Task 5.A.2: Prepare a scope of work for identification of existing methods and tools for evaluation of water supply requests.

> **METHODS**: Consult with Subject Matter Specialists to determine available methods and tools for evaluating impacts of reservoir operations on water supply allocation in Philpott Lake.
>
> **METHOD OF ACCOMPLISHMENT**: TBD

Phase I - Task 5.B: What are the existing and potential future water supply withdrawals downstream of Philpott Lake that could be impacted by release modifications? The items under this task are focused on identifying existing and potential future water supply users downstream of Philpott Lake. This data is a necessary part of understanding potential impacts to downstream water supply withdrawals. Several comments concerning the needs of downstream water supply users were received during the reconnaissance phase of this study. These comments expressed concern primarily for maintaining sufficient minimum releases from Philpott Lake to support downstream withdrawal facilities. Therefore, the scope for data collection and analysis under this task will include communication with the specialists identified for Low Flow Conditions.

Phase I - Task 5.B.1: Evaluate the adequacy of existing water supply data. Identify data gaps and prepare recommendations for collection of additional data, as needed.

> **METHODS**: Consult with Subject Matter Specialists, and solicit input from other municipal, industrial and governmental entities to determine what data will be needed to adequately define and discuss impacts to downstream water supply issues during the feasibility study. Data would include: type of facility, location, capacity, low flow requirements, owner, and future demands.

Phase I - Task 5.B.2: Prepare a scope of work to identify existing methods and tools for evaluation of impacts to downstream water supply users.

> **METHODS**: Consult with Subject Matter Specialists to determine available methods and tools for evaluating impacts of reservoir operations on downstream water supply users. This task will, at minimum, include the preparation of a scope of work to develop applicable GIS technology for water supply data.

Phase I - Task 6: Aesthetics and Recreation

It has been determined that the likely effects of study recommendations on aesthetics and recreation will minor and are not likely to produce significant opportunities for resource improvement. Therefore, aesthetics and recreation as a study purpose will not be included. The impacts caused by any changes to the operation of Philpott Dam on aesthetics and recreation will be reviewed during phase III of the study. Studies, if any, should be undertaken, only to the extent that they are required for the review of the impacts during the analysis undertaken to prepare the Environmental Impact Statement for the project. There will be no data collection for this task during phase II. Studies identified as necessary for impact review and impact analysis will be conducted during phase III of the study.

Table 1 ***Philpott Lake 216 Feasibility Phase I Estimate***		
Task		**Cost**
Task 1 - Shoreline Management & Erosion Total		**$0**
Task 2 - Natural & Cultural Resources		
Task 2.A.1 - Endangered Species Restoration	$25,000	
Task 2.A.2 - Habitat Management	$15,000	
Task 2.A.3a - Temperature Management	$20,000	
Task 2.A.3b - Flow Management	$20,000	
Task 2 - Natural & Cultural Resources Total		**$60,000**
Task 3 - Operating Policies & Administrative Procedures Total		**$0**
Task 4 - Water Quality		
Task 4.A - Water Quality Downstream of Philpott Dam		
Task 4.A.1 - Evaluate Existing Data	$5,000	
Task 4.A.2 - Prepare Scope of Work for Data Collection	$10,000	
Task 4.A.3 - Evaluate Water Quality Models	$20,000	
Task 4.A.4 - Prepare Scope of Work for Water Model Revision	$20,000	
Task 4.A.5 - Identify Flow Management Options & Evaluate Downstream Water Quality Effects	$15,000	
Task 4.A - Water Quality Downstream of Philpott Dam Subtotal		***$70,000***
Task 4.A - Water Quality in Philpott Reservoir		
Task 4.B.1 - Evaluate Water Existing Water Quality	$5,000	
Task 4.B.2 - Prepare Scope of Work for Data Collection	$5,000	
Task 4.B.5 - Identify Flow Management Options & Evaluate Reservoir Water Quality Effects	$5,000	
Task 4.A - Water Quality in Philpott Reservoir Subtotal		***$15,000***
Task 4 - Water Quality Total		**$85,000**
Task 5 - Water Supply		
Task 5.A - Identify Potential Water Supply Users		
Task 5.A.1 - Evaluate Potential Water Supply Needs	$16,000	
Task 5.A.2 - Determine Methods & Tools for Evaluating Impacts	$16,000	
Task 5.A - Identify Potential Water Supply Users Subtotal		***$32,000***
Task 5.B - Identify Impacts Existing and Potential Water Supply Users		
Task 5.B.1 - Determine Data Requirements for Impact Analysis on Downstream Water Supply Users	$16,000	
Task 5.B.2 - Prepare Scope of Work to Evaluate Impact on Downstream Water Supply Users	$16,000	
Task 5.B - Identify Impacts Existing and Potential Water Supply Users Subtotal		***$32,000***
Task 5 - Water Supply		**$64,000**
Task 6 - Aesthetics and Recreation		**$0**
Supervision, Administration, and Coordination		**$116,000**
Contingency		**$75,000**
Phase I Total Estimated Cost		**$400,000**

Summary

The reconnaissance study phase was completed in September 2006 at a cost of $138,000. Phase I of the feasibility study is estimated to cost $400,000 as shown on Table 1. During phase I existing data will be identified and scopes of work will be prepared for needed additional technical studies, data collection, and modeling.

Tasks and cost for phase II will be determined during phase I. The preliminary estimate for phase II is $1,000,000. During phase II needed additional technical studies, data collection, and modeling will be completed.

The estimated cost for phase III of the study is:

Estimated Cost	$750,000
Contingency	$350,000
	$1,100.000

During phase III study elements will be integrated and overall alternatives will be considered. The PDT, in consultation with the appropriate subject matter specialists, will formulate and evaluate alternative plans and select a recommended plan. A diagram illustrating the linkages between the different study elements is shown in attachment 4.

Total Study Costs

The total feasibility study costs are estimated to be $2,500,000. Estimated study costs may change throughout the various phases of this study.

PREPARED BY: _____
Richard H. Lewis, Lead Planner

REVIEWED:

CESAW-PM-C _____
Ben Lane, Project Manager

CESAW-TS-E: _____
Wayne Bissette, P.E., Chief, Engineering Branch

CESAW-TS-P: _____
Coleman Long, Chief, Planning and Environmental Branch

CESAW-TS-C: _____
Phil Kadala, Chief, Construction Branch

CESAW-TS: _____
Henry J. Maser III, P.E., Chief , Technical Services Division

CESAW-CT: _____
Sherrel Bunn, Contracting Business Advisor
Savannah Regional Contracting Center, Wilmington Office

CESAS-RE: _____
Ronald L. Ogden, Chief, SAS - RE Division

CESAW-PM-C: _____
Samuel J. Colella, P.E., Chief, Project Management. Branch

CESAW-PM-P: _____
James M. Medlock, Chief, Programs Management Branch

CESAW-DDPM: _____
Christine M. Brayman Deputy District Engineer
for Programs & Project Management

REFERENCES CITED

REFERENCES CITED

Burkhead, N.M.

1983 *Ecological studies of two potentially threatened fishes (the orangefin madtom, Noturus gilberti and the Roanoke logperch, Percina rex) endemic to the Roanoke River drainage.* Final report to the Wilmington District. U.S. Army Corps of Engineers. Wilmington, NC.

Cooper, J., S. Robinson, and J. Funderburg

1977 *Endangered and threatened plants and animals of North Carolina; proceedings of the symposium on endangered and threatened biota of North Carolina.* North Carolina State Museum of Natural History, Raleigh, NC.

Orth, Donald J., Tammy J. Newcomb, Andrew C. Dolloff, and Panos Diplas

2000 *Influences of Fluctuating Releases on Stream Habitats for Brown Trout in the Smith River Below Philpott Dam,* Annual Report under Contract No. 08220203. Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, August 31, 2000

2001 *Influences of Fluctuating Releases on Stream Habitats for Brown Trout in the Smith River Below Philpott Dam,* Annual Report under Contract No. 08220203. Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, August 31, 2001

2002 *Influences of Fluctuating Releases on Stream Habitats for Brown Trout in the Smith River Below Philpott Dam,* Annual Report under Contract No. 08220203. Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, August 31, 2002

2003 *Influences of Fluctuating Releases on Stream Habitats for Brown Trout in the Smith River Below Philpott Dam,* Annual Report under Contract No. 08220203. Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, August 31, 2003

Poplin, Eric C. and David C. Jones

1992 Archaeological and Historical Survey and Historic Properties Management Plan For Philpott Lake, Roanoke River Basin, Virginia, U.S. Army Corps of Engineers, Wilmington District. Wilmington, North Carolina.

U.S. Census Bureau

2004 Virginia Quick Facts from The U.S. Census Bureau Webpage Web Address http://quickfacts.census.gov/qfd/states/51000.html, Site Visited 7 July 2004.

U.S. Army Corps of Engineers 1988 *Environmental Quality - Procedures for Implementing NEPA.* Publication Number: Engineering Regulation 200-2-24 March 1988, U.S. Army Corps of Engineers, Washington D.C.

2000 *Planning Guidance Note Book.* Engineering Regulation 1105-2-100, April 22, 2000, U.S. Army Corps of Engineers, Washington D.C.

U.S. Army Corps of Engineers, Wilmington District

1982 Philpott Lake, Master Plan Update, Design Memorandum Number 4, U.S. Army Corps of Engineers, Wilmington District. Wilmington, NC.

1992 Philpott Lake Operational Management Plan, U.S. Army Corps of Engineers, Wilmington District. Wilmington, NC.

1997 Environmental Assessment (EA) for Shoreline Protection Philpott Lake Franklin and Patrick Counties, Virginia, August 1997. U.S. Army Corps of Engineers, Wilmington District. Wilmington, NC.

1997 Finding of No Significant Impact for Shoreline Protection Philpott Lake Franklin and Patrick Counties, Virginia, August 1997. U.S. Army Corps of Engineers, Wilmington District. Wilmington, NC.

2001 Reconnaissance Report John H. Kerr Dam and Reservoir, Virginia and North Carolina (Section 216) Lower Roanoke River. U.S. Army Corps of Engineers, Wilmington District. Wilmington, NC.

2001 Reconnaissance Report, John H. Kerr Dam and Reservoir, Virginia and North Carolina, (Section 216), Lower Roanoke River. March 2001. U.S. Army Corps of Engineers, Wilmington District. Wilmington, NC.

2002 Environmental Assessment (EA) for Philpott Park Marina, Philpott Lake, Henry County, Virginia. September 2002. U.S. Army Corps of Engineers, Wilmington District. Wilmington, NC.

2002 Finding of No Significant Impact (FONSI) for Philpott Park Marina, Philpott Lake, Henry County, Virginia. November 2002. U.S. Army Corps of Engineers, Wilmington District. Wilmington, NC.

2003 Project Management Plan, Feasibility Study Under Section 216 of Public Law 91-611, as amended, John H. Kerr Dam and Reservoir, Lower Roanoke River, Virginia and North Carolina, U.S. Army Corps of Engineers, Wilmington District. Wilmington, NC.

2003 U.S. Army Corps of Engineers, Wilmington District Homepage, Philpott Project Products, Description of Philpott Project. Web Address: http://epec.saw.usace.army.mil/phildesc.txt. Web Site visited 27 May 2003.

2004 Philpott Dam and Lake, Virginia (Section 216 Study) Section 905(b) (WRDA 1986) Analysis, on file U.S. Army Corps of Engineers, Wilmington District, Wilmington, North Carolina.

U.S. Council on Environmental Quality 1978 *Regulations for Implementing National Environmental Policy Act*. 40 Code of Federal Regulations Parts 1500-1508, 43 Federal Register 55990, November 28, 1978.

U.S. Water Resources Council 1983 *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies*. 8 July 1983, United States Water Resources Council, Washington DC.

ATTACHMENT 1
PHILPOTT LAKE, VIRGINIA (SECTION 216) STUDY SCHEDULE

Philpot Dam and Reservoir Section 216 Study Schedule

Task	Estimated Schedule	Scheduled Actual
Complete reconnaissance report-District Commander Signs 905(b)	Sep 2004	Actual
Reconnaissance report approved by Division	Jan 2005	Actual
PMP completed	Nov 2006	
Complete reconnaissance phase - FCSA executed	Sep 2006	Actual
Begin phase I of feasibility phase	Oct 2006	Actual
Technical work groups formed/Team leaders assigned	Nov 2006	Actual
Complete phase I-Work groups complete scopes of work for phase II [1]	Feb 2008	
Begin phase II-Award data collection contracts	Mar 2008	
Complete phase II-Work groups complete technical appendices	Feb 2009	
Begin phase III-Work groups begin plan formulation and evaluation	Mar 2009	
Work groups select recommended plan	Dec 2009	
Complete draft feasibility report and NEPA documents	Jun 2010	
Complete NEPA coordination and processing	Oct 2010	
Complete final feasibility report and submit to Division	Dec 2010	
Feasibility report approved by Division	Jan 2011	

[1] Includes a 7 month slip in Fiscal Year 2007 due to constrained Federal funding. Work as proceeding in FY 2007 with $85,000 carried over from FY 2006. The President's Budget for FY 2007 is zero.

ATTACHMENT 2
EXECUTIVE COMMITTEE
AND PROJECT DELIVERY TEAM MEMBERS
PHILPOTT LAKE, VIRGINIA (SECTION 216) STUDY

Philpott Dam and Lake
(Section 216) Feasibility Study
Participant List

Organization	First Name	Last Name	Title	Address 1	Address 2	Address 3	City/State/Zip Code	Email	Number
American Rivers	Robbin	Marks		1101 14th Street, NW,	1101 14th Street, NW,	Suite 1400	Washington, DC 20005	rmarks@americanrivers.org	202-347-7550
American Rivers Count									1
Concerned Citizen	David	Andrews	Concerned Citizen	2375 Cog Hill Court			Raleigh, North Carolina 27604		(919) 231-3538
Concerned Citizen Count									1
Roanoke Time	Bill	Cochran	Concerned Citizen	5880 Blacksburg Road			Catawba, Virginia 24070	xtrails@earthlink.net	(540) 384-7188
Roanoke Time Count									1
Concerned Citizen	Paul	Gruver	Concerned Citizen	101 Fawn Drive			Wake Forest, North Carolina 27587		(919) 554-09035
Concerned Citizen	Robert	Holliday	Concerned Citizen	Post Office Box 1590			Lexington, South Carolina 29071-1590		(803) 957-5181
Concerned Citizen	Martin	Jones	Concerned Citizen	80 Fiddlers Run Road			Roxboro, North Carolina 27574		(336) 599-0773
Concerned Citizen	Ralph	Mueller III	Concerned Citizen	2012 Kelly Glen Lane			Apex, North Carolina 27502		(910) 387-7750
Concerned Citizen	James	Thomas	Concerned Citizen	4796 Susannah Drive			Blacksburg, Virginia 24060		(540) 552-5902
Concerned Citizen	Larry	Townsend	Concerned Citizen	Post Office Box 4426			High Point, North Carolina 27623		
Concerned Citizen Count									5
Dan River Basin Association	Katherine	Herbert		DRBA Rivers and Trails	DRBA Rivers and Trails	P. O. Box 7	Collinsville, VA 24078	khebert@danriver.org	276-634-2545
Dan River Basin Association	Kathryn	Mull	Executive Director	P. O. Box 65		P. O. Box 65	Mayodan, NC 27027	kmull@danriver.org	336-548-3722
Dan River Basin Association Count									2
Danville City	Jerry L.	Gwaltney	City Manager	Municipal Building	Municipal Building	427 Patton St.	Danville, VA 24541	cmo@ci.danville.va.us	434-799-5100
Danville City Count									1
Danville Water and Waste Water Treatment Division	Barry T.	Dunkley	Director			279 Park Avenue	Danville, VA 24541	dunklbt@ci.danville.va.us	434-799-6473
Danville Water and Waste Water Treatment Division Count									1
Dominion Resources	Bob	Graham	Dominion Power	Environmental Biology		4111 Castlewood Rd.	Richmond, VA 23234	bob_graham@dom.com	(804) 271-5375
Dominion Resources	Jim	Thorton	Dominion Power			4111 Castlewood Rd.	Richmond, VA 23234	James_Thornton@Dom.com	
Dominion Resources Count									1
Franklin County	Richard E.	Huff II		40 East Court St.		40 East Court St.	Rocky Mount, VA 24151	countyadmin@franklincountyva.org	540-483-3030
Franklin County Count									1
Freshwater Fly Fishers of Virginia	Dan	Genest	Vice-President			125000 Musical Lane	Midlothian, Va 23113	dan_genest@dom.com	
Freshwater Fly Fishers of Virginia Count									0
Gateway Streetscape Foundation	Louis	Christensen		Henry Co. Admin. Building	Suite 201	P. O. Box 7	Colinsville, VA 24078	gateway@co.henry.va.us	276-634-4674/4622
Gateway Streetscape Foundation Count									1
Henry County	Benny	Summerlin	County Administrator	P. O. Box 7		P. O. Box 7	Collinsville, VA 24078	sbiege@co.henry.va.us	276-634-4601
Henry County Count									1
Henry/Martinsville Health Dept.	Edward	Van Oeveren, MD	Dist. Health Director	P. O. Box 1032		P. O. Box 1032	Martinsville, VA 24114		276-638-2311
Henry/Martinsville Health Dept. Count									1
Martinsville and Henry Co. Economic Development	Mark	Heath	President/CEO		134 East Church St., Suite 200	P.O. Box 631	Martinsville, VA 24114	mheath@yesmartinsville.com	276-403-5940
Martinsville and Henry Co. Economic Development Count									1
Martinsville City	Dan	Collins	City Manager			P. O. Box 1112	Martinsville, VA 24114	dcollins@ci.martinsville.va.us	276-403-5180 (216)
Martinsville City Count									1
Martinsville Water Resources Department	John	Dyches	Director oif Water Resources			P.O Box 1112	Martinville, VA 4114-1112		
Martinsville Water Resources Department Count									0
Martinsville-Henry Co. Chamber of Commerce	Kim	Atkins	Presidet			P. O. Box 709	Martinsville, VA 24114-0709	kima@mhcchamber.com	276-632-6401
Martinsville-Henry Co. Chamber of Commerce Count									1
Nature Conservancy	Mike	Lipford	Executive Director	Virginia Field Office	Virginia Field Office	409 Westfield Rd.	Charlottesville, VA 22901	mlipford@tnc.org	434-295-6106
Nature Conservancy Count									1
North Carolina Council of Trout Unlimited	James	Berrier	President					James.Berrier@ssa.gov	
North Carolina Council of Trout Unlimited Count									0
North Carolina Division of Water Quality	Alan K.	Klimek, P.E.	Director	1617 Mail Service Center		1617 Mail Service Center	Raleigh, NC 27699-1617	alan.klimek@ncmail.net	910-733-5083 ext 203
North Carolina Division of Water Quality	Jay	Sauber	Unit Supervisor	Ecosystem Unit	Ecosystem Unit	1617 Mail Service Center	Raleigh, NC 27699-1617	jay.sauber@ncmail.net	919-733-9960
North Carolina Division of Water Quality Count									2
North Carolina Wildlife Resources Commission	Robert	Curry	Fisheries Chief	Division of Inland Fisheries	Division of Inland Fisheries	1721 Mail Service Center	Raleigh, NC 27699-1721	robert.curry@ncwildlife.org	919-707-0220
North Carolina Wildlife Resources Commission Count									1

Philpott Dam and Lake
(Section 216) Feasibility Study
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Patrick County	Regena	Handy	County Administrator	P. O. Box 66		P. O. Box 66	Stuart, VA 24171	rhandy@co.patrick.va.us	276-694-6094
Patrick County Count									1
Roanoke Chapter of Trout Unlimited	Dover	England	President	4934 Shadow Lane		4934 Shadow Lane	Roanoke, VA 24019		540-562-1840
Roanoke Chapter of Trout Unlimited Count									1
Roanoke River Basin Association	Gene	Addesso	Vice-President	8845 Woodyhill Road		8845 Woodyhill Road	Raleigh, NC 27613	gaddesso@rrba.org	919-870-0833
Roanoke River Basin Association Count									1
Secretary of Natural Resources	Jeff	Corbin	Deputy Assistant Secretary of Natural Resources	P. O. Box 1475		P. O. Box 1475	Richmond, VA 23218	Jeff.Corbin@governor.virginia.gov	804-786-0044
Secretary of Natural Resources Count									1
Smith River Chapter of Trout Unlimited	Al	Kittredge	Vice President					aakitt@earthlink.net	910-868-6235 (H)
Smith River Chapter of Trout Unlimited	Robert	Woods	President	50 Spring Dr.		50 Spring Dr.	Collinsville, VA 24078	kfboyd@kimbanet.com	
Smith River Chapter of Trout Unlimited Count									1
Smith River Junction	Buster	Ferguson	Owner	P. O. Box 1142		P. O. Box 1142	Fieldale, VA 24089	Ferguson583@hotmail.com	276-732-8815
Smith River Junction Count									1
Southeastern Power Administration	Carter	Edge	SEPA					CarterE@sepa.doe.gov	(706) 213-3863
Southeastern Power Administration	Herb	Nadler					Elberton, Georgia 30635- 2496	herbn@sepa.doe.gov	706 213-3853
Southeastern Power Administration Count									2
Southern Environmental Law Center	Kay E.	Slaughter		VA/TN Office	VA/TN Office	201 West Main St., Suite 14	Charlottesville, VA 22902-5065	kslaughter@selcva.org	434-977-4090
Southern Environmental Law Center Count									1
U. S. Fish and Wildlife Service	Kim	Smith	Biologist	6669 Short Lane		6669 Short Lane	Gloucester, VA 23061	Kimberly_Smith@FWS.GOV	804-693-6694 (126)
U. S. Fish and Wildlife Service Count									1
U.S. Fish and Wlidlife Service	Karl	Hess	Fish and Wildlife Biologist			4401 N. Fairfax Drive RM. 840	Arlington, VA 22203	karl_hess@fws.gov	703-358-2293
U.S. Fish and Wlidlife Service Count									1
USACE, Wilmington	William	Adams	Chief, Environmental Resources Section	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	william.f.adams@usace.army.mil	910 251-4748
USACE, Wilmington	Christine	Brayman	Deputy District Engineers For Programs and Project Management	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	christine.m.brayman@usace.army.mil	910 251-4478
USACE, Wilmington	Daniel	Brown	Chief. Operations Support Section	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	daniel.s.brown@usace.army.mil	(910) 251-4832
USACE, Wilmington	Terry	Brown	Hydraulics Operations Manager, USACE Wilmington	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	terry.m.brown@usace.army.mil	910 251-4761
USACE, Wilmington	Richard	Carroll	Hydropower Supervisor	5460 Buggs Island Road			Boydton, VA 23917	richard.d.carroll@usace.army.mil	434-738-6633 ext. 212
USACE, Wilmington	Noel	Clay	Chief, Plan Formulation and Economics Section	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	noel.c.clay@usace.army.mil	910 251-4706
USACE, Wilmington	Michael	Hosey	Conservation Specialist	2080 Jordan Dam Access Road			Moncure, NC 27550-0144	michael.l.hosey.II@usace.army.mil	919-542-4501 ext.
USACE, Wilmington	Jim	Jacaruso	GIS Coordinator	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	james.d.jacaruso@usace.army.mil	910 252-4064
USACE, Wilmington	Richard	Kimmel	Archaeologist	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	richard.h.kimmel@usace.army.mil	910 251-4994
USACE, Wilmington	Brooke	Lamson	Chief, Office of Counsel	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	brooke.lamson@usace.army.mil	910 251-4499
USACE, Wilmington	Ben	Lane	Project Manager	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	ben.lane@usace.army.mil	910 2514831
USACE, Wilmington	Richard	Lewis	Lead Planner	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	richard.h.lewis@usace.army.mil	910 251-4755
USACE, Wilmington	Coleman	Long	Chief Planning and Environmental Branch	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	coleman.long@usace.army.mil	910 251-4505
USACE, Wilmington	Kevin	McDaniels	Philpott Reservoir, Operations Manager	Philpott Lake Management Center		1058 Philpott Dam Road	Bassett, Virginia 24055	kevin.j.mcdaniels@usace.army.mil	276 629-4512 ext. 224
USACE, Wilmington	Neil	Meyers	Chief, Lakes Branch	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	neil.e.myers@usace.army.mil	910-251-4606
USACE, Wilmington	Phil	Payonk	Biologist	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	philip.m.payonk@usace.army.mil	910 251-4589
USACE, Wilmington	Allen	Piner	Water Supply	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	george.a.piner@usace.army.mil	910 251-4762
USACE, Wilmington	Frank	Snipes	Economist	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	frank.e.snipes@usace.army.mil	910 251-4774
USACE, Wilmington	Greg	Williams	Chief, Coastal, Hydrology, and Hydraulics Section	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	greg.l.williams@usace.army.mil	910 251-4767
USACE, Wilmington	Tony	Young	Water Control	69 Darllington Avenue	Post Office Box 1890		Wilmington, North Carolina 20402-1890	michael.a.young@usace.army.mil	910 251-4455

Philpott Dam and Lake
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Participant List

USACE, Wilmington Count									20
VA Dept. Conservation and Recreation	John	Grooms	Superintendent	Fairystone State Park	Fairystone State Park	967 Fairystone Lake Drive	Stuart, VA 24171-9588	John.Grooms@dcr.virginia.gov	276-930-2424
VA Dept. Conservation and Recreation	Joseph	Maroon	Director	203 Governor St., Suite 213		203 Governor St., Suite 213	Richmond, VA 23219-2094	Joseph.Maroon@dcr.virginia.gov	804-786-2123
VA Dept. Conservation and Recreation	Robert	Munson	Planning Bureau Mang.	203 Governor St., Suite 213		203 Governor St., Suite 213	Richmond, VA 23219-2094	Robert.Munson@dcr.virginia.gov	804-786-6140
VA Dept. Conservation and Recreation	Tom	Smith	Natural Heritage Program	217 Governor St., Suite 213		217 Governor St., Suite 213	Richmond, VA 23219-2094	Tom.Smith@dcr.virginia.gov	804-786-7951
VA Dept. Conservation and Recreation Count									4
VA Dept. of Environmental Quality	George	Devlin	Biologists	Roanoke, VA 24019	West Central Regional Office	3019 Peters Creek Road	Roanoke, VA 24019		
VA Dept. of Environmental Quality	Steve	Dietrich	Regional Director	West Central Regional Office	West Central Regional Office	3019 Peters Creek Road	Roanoke, VA 24019	sadietrich@deq.virginia.gov	540-562-6762
VA Dept. of Environmental Quality	Joe	Hassell		P. O. Box 10009		P. O. Box 10009	Richmond, VA 23240	jphassell@deq.virginia.gov	804-698-4072
VA Dept. of Environmental Quality	Dave	Paylor	Director	P. O. Box 1105		P. O. Box 1105	Richmond, VA 23218	dkpaylor@deq.virginia.gov	804-698-4020
VA Dept. of Environmental Quality	Larry	Willis	Biologists		West Central Regional Office	3019 Peters Creek Road	Roanoke, VA 24019		
VA Dept. of Environmental Quality Count									3
VA Dept. of Game and Inland Fisheries	Arthur L.	LaRoche	Regional Fisheries Manager	1132 Thomas Jefferson Rd.		1132 Thomas Jefferson Rd.	Forest, VA 24551	Bud.LaRoche@dgif.virginia.gov	434-525-7522
VA Dept. of Game and Inland Fisheries	Mike	Pinder	Wildife Diversity Biologist	Draper Aden Building	Draper Aden Building	2206 S. Main Street, Suite C	Blacksburg, VA 24060	Mike.Pinder@dgif.virginia.gov	540-961-8387
VA Dept. of Game and Inland Fisheries	Scott	Smith	Fisheries Biologist	1132 Thomas Jefferson Rd.		1132 Thomas Jefferson Rd.	Forest, VA 24551	Scott.Smith@dgif.virginia.gov	434-525-7522
VA Dept. of Game and Inland Fisheries	Dan	Wilson	Fisheries Biologist	1132 Thomas Jefferson Rd.		1132 Thomas Jefferson Rd.	Forest, VA 24551	Dan.Wilson@dgif.virginia.gov	434-525-7522
VA Dept. of Game and Inland Fisheries Count									4
VARACER	Carole	Inge						cingehome@aol.com	
VARACER Count									0
Virginia Council of Trout Unlimited	John	Ross	Council Chair	P. O. Box 521		P. O. Box 521	Upperville, VA 20185	jross@crosslink.net	540- 592-7020
Virginia Council of Trout Unlimited Count									1
Virginia Department of Health	Jim	Burns, MD,MBA	Deputy Commissioner for Public Health	P. O. Box 2448		P. O. Box 2448	Richmond, VA 23219	jim.burns@vdh.virginia.gov	804-864-7002
Virginia Department of Health	Robert B.	Stroube, MD, MPH	State Health Commissioner	P. O. Box 2448		P. O. Box 2448	Richmond, VA 23219	robert.stroube@vdh.virginia.gov	804-864-7009
Virginia Department of Health Count									2
Virginia Department of Historic Resources	Kathleen	Kilpatrick	Director	Richmond Central Office	Richmond Central Office	2801 Kensington Ave.	Richmond, VA 23221	kathleen.kilpatrick@dhr.virginia.gov	804-367-2323
Virginia Department of Historic Resources	Tom	Klatka	Archaeologist	Roanoke Office				tom.klatka@dhr.virginia.gov	
Virginia Department of Historic Resources Count									1
Virginia Dept. of Agriculture and Consumer Services	Don	Blankenship	Deputy Commissioner	102 Governor St.		102 Governor St.	Richmond, VA 23219	don.blankenship@vdacs.virginia.gov	804-786-3501
Virginia Dept. of Agriculture and Consumer Services Count									1
Virginia Dept. of Conservation & Recreation	John	Davy						jdavy@dcr.state.va.us	(804) 786-1119
Virginia Dept. of Conservation & Recreation Count									1
Virginia Dept. of Forestry	Carl	Garrison, III	State Forester	900 Natural Resources Dr.		900 Natural Resources Dr.	Charlottesville, VA 22903	carl.garrison@dof.virginia.gov	434-977-6555
Virginia Dept. of Forestry Count									1
Virginia Museum of Natural History	Jim	Gette	Executive Director	1001 Douglas Ave.		1001 Douglas Ave.	Martinsville, VA 24112	tim.gette@vmnh.virginia.gov	276-666-8600
Virginia Museum of Natural History Count									1
Virginia Polytechnic Institute and State University Fisheries and Wildlife Science	Paul	Angermeir, PhD	VT Ass't.Cooperative Unit Leader	Dept. of Fisheries and Wildlife	Dept. of Fisheries and WildlifeVirginia Tech	Cheatham Hall	Blacksburg, VA 24061-0321	biota@vt.edu	540-231-4501
Virginia Polytechnic Institute and State University Fisheries and Wildlife Science	Don	Orth	Professor	Dept. of Fisheries and Wildlife	Dept. of Fisheries and Wildlife	100 Cheatham Hall	Blacksburg, VA 24061-0321	dorth@vt.edu	540-231-5573
Virginia Polytechnic Institute and State University Fisheries and Wildlife Science Count									2
West Piedmont Planning Dist. Commission					1100 Madison Street	P. O. Box 5268	Martinsville, VA 24115	staff@wppdc.org	276-638-3987
West Piedmont Planning Dist. Commission Count									1
Grand Count									77

ATTACHMENT 3
WORK GROUPS
PHILPOTT LAKE, VIRGINIA (SECTION 216) STUDY

PHILPOTT 216 FEASIBILITY STUDY
PROPOSED TECHNICAL WORK GROUPS
(Individuals Agency Representatives will be chosen by the Agency)

Shoreline Management and Erosion
Smith River Chapter Trout Unlimited
US Army Corps of Engineers (USACE), Wilmington
Virginia Department of Forestry
Virginia Department of Game and Inland Fisheries

Natural and Cultural Resources
Blue Ridge Chapter Trout Unlimited
Franklin County
Henry County
North Carolina Wildlife Resources Commission
Patrick County
Smith River Chapter Trout Unlimited
USACE, Wilmington
Virginia Department of Conservation and Recreation
Virginia Department of Environmental Quality, (VDEQ)
West Central Regional Office
Virginia Department of Agriculture and Consumer Services
Virginia Department of Historic Resources

Operation Policies and Administrative Procedures
Franklin County
Henry County
Patrick County
Southeastern Power Administration
USACE, Wilmington
Virginia Department of Environmental Quality

Water Quality (Temperature/Multi-level)
City of Danville
City of Martinsville
Franklin County
Henry County
North Carolina Division of Water Quality
Patrick County
USACE, Wilmington
VDEQ, Office of Environmental Review
VDEQ, Waste Division
VDEQ, Water Division
VDEQ, West Central Regional Office
Virginia Department of Health
Virginia Department of Game and Inland Fisheries

Water Supply
Tony Young, USACE, Wilmington
VDEQ, Water Division

Aesthetics and Recreation
Henry County
Patrick County
USACE, Wilmington
Virginia Department of Conservation and Recreation

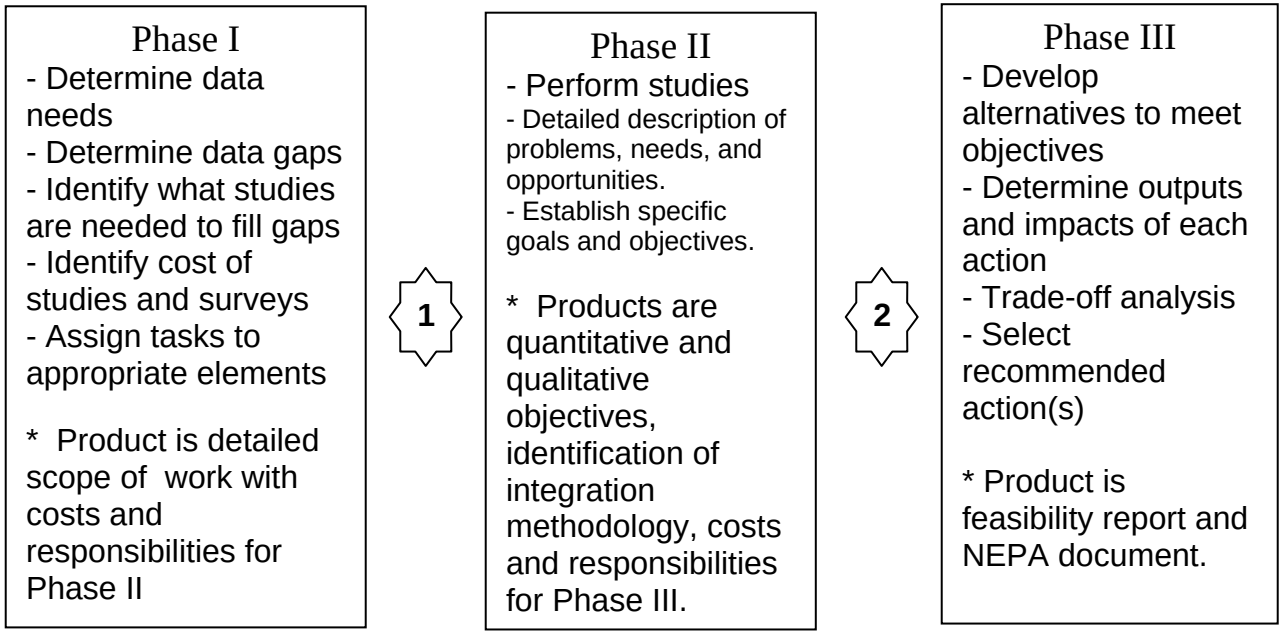
ATTACHMENT 4
THREE PHASE STUDY APPROACH

ATTACHMENT 4
THREE PHASE STUDY APPROACH

Corps Requirements: PMP and FCSA must identify full cost of feasibility study
FCSA must identify allocation of costs for each partner

Sponsor Requirements: PMP should be structured to be useful to project sponsor and beneficiaries.
PMP should identify stakeholder contributions
PMP should address tasks, methods, costs, and responsible parties

Actions: Project Management Plan will be structured to identify a 3-phase approach, identify Subject Matter Specialists for phase I activities, and costs for each project phase. The three phases are described in the following table.



1 Decision Point 1 – what studies, surveys, etc. will be conducted in phase II and how will the costs be allocated.

2 Decision Point 2 – what objectives will be addressed in phase III and how will costs be allocated.

ATTACHMENT 5
FEASIBILITY COST SHARING AGREEMENT
PHILPOTT LAKE, VIRGINIA (SECTION 216) STUDY

AGREEMENT
BETWEEN THE DEPARTMENT OF THE ARMY
AND
THE COMMONWEALTH OF VIRGINIA
FOR THE PHILPOTT LAKE, VIRGINIA (SECTION 216) FEASIBILITY STUDY

THIS AGREEMENT is entered into this 25th day of September, 2006, by and between the Department of the Army (hereinafter the "Government"), represented by the District Engineer executing this Agreement, and the Commonwealth of Virginia, represented by the Secretary, Natural Resources (hereinafter the "Sponsor"),

WITNESSETH, that

WHEREAS, the Congress has authorized the Secretary of the Army, acting through the Chief of Engineers, to review the operation of projects constructed by the Corps of Engineers for navigation, flood control, water supply, and related purposes when found advisable due to significantly changed physical, economic or environmental conditions, and to report to Congress with recommendations on the advisability of modifying the structures or their operation, pursuant to the authority provided by Section 216 of the River and Harbor and Flood Control Act of 1970, Public Law 91-611; and

WHEREAS, the U.S. Army Corps of Engineers has conducted a reconnaissance study of the operations of the Philpott Dam and Lake and the effects to the Smith River pursuant to this authority, and has determined that further study in the nature of a "Feasibility Phase Study" (hereinafter the "Study") is required to fulfill the intent of the study authority and to assess the extent of the Federal interest in participating in a solution to the identified problem; and

WHEREAS, Section 105 of the Water Resources Development Act of 1986 (Public Law 99-662, as amended) specifies the cost sharing requirements applicable to the Study; and

WHEREAS, the Sponsor has the authority and capability to furnish the cooperation hereinafter set forth and is willing to participate in study cost sharing and financing in accordance with the terms of this Agreement; and

WHEREAS, the Sponsor and the Government understand that entering into this Agreement in no way obligates either party to implement a project and that whether the Government supports a project authorization and budgets it for implementation depends upon, among other things, the outcome of the Study and whether the proposed solution is consistent with the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and with the budget priorities of the Administration;

NOW THEREFORE, the parties agree as follows:

ARTICLE I - DEFINITIONS

For the purposes of this Agreement:

A. The term "Study Costs" shall mean all disbursements by the Government pursuant to this Agreement, from Federal appropriations or from funds made available to the Government by the

Sponsor, and all negotiated costs of work performed by the Sponsor pursuant to this Agreement. Study Costs shall include, but not be limited to: labor charges; direct costs; overhead expenses; supervision and administration costs; the costs of participation in Study Management and Coordination in accordance with Article IV of this Agreement; the costs of contracts with third parties, including termination or suspension charges; and any termination or suspension costs (ordinarily defined as those costs necessary to terminate ongoing contracts or obligations and to properly safeguard the work already accomplished) associated with this Agreement.

B. The term "estimated Study Costs" shall mean the estimated cost of performing the Study as of the effective date of this Agreement, as specified in Article III.A. of this Agreement.

C. The term "excess Study Costs" shall mean Study Costs that exceed the estimated Study Costs and that do not result from mutual agreement of the parties, a change in Federal law that increases the cost of the Study, or a change in the scope of the Study requested by the Sponsor.

D. The term "study period" shall mean the time period for conducting the Study, commencing with the release to the U.S. Army Corps of Engineers Wilmington District of initial Federal feasibility funds following the execution of this Agreement and ending when the Assistant Secretary of the Army (Civil Works) submits the feasibility report to the Office of Management and Budget (OMB) for review for consistency with the policies and programs of the President.

E. The term "PSP" shall mean the Project Study Plan, which is attached to this Agreement and which shall not be considered binding on either party and is subject to change by the Government, in consultation with the Sponsor.

F. The term "negotiated costs" shall mean the costs of in-kind services to be provided by the Sponsor in accordance with the PSP.

G. The term "fiscal year" shall mean one fiscal year of the Government. The Government fiscal year begins on October 1 and ends on September 30.

ARTICLE II - OBLIGATIONS OF PARTIES

A. The Government, using funds and in-kind services provided by the Sponsor and funds appropriated by the Congress of the United States, shall expeditiously prosecute and complete the Study, in accordance with the provisions of this Agreement and Federal laws, regulations, and policies.

B. In accordance with this Article and Article III.A., III.B. and III.C. of this Agreement, the Sponsor shall contribute cash and in-kind services equal to fifty (50) percent of Study Costs other than excess Study Costs. The Sponsor may, consistent with applicable law and regulations, contribute up to fifty (50) percent of Study Costs through the provision of in-kind services. The in-kind services to be provided by the Sponsor, the estimated negotiated costs for those services, and the estimated schedule under which those services are to be provided are specified in the PSP. Negotiated costs shall be subject to an audit by the Government to determine reasonableness, allocability, and allowability.

C. The Sponsor shall pay a fifty (50) percent share of excess Study Costs in accordance with Article III.D. of this Agreement.

D. The Sponsor understands that the schedule of work may require the Sponsor to provide cash or in-kind services at a rate that may result in the Sponsor temporarily diverging from the obligations concerning cash and in-kind services specified in paragraph B. of this Article. Such temporary divergences shall be identified in the quarterly reports provided for in Article III.A. of this Agreement and shall not alter the obligations concerning costs and services specified in paragraph B. of this Article or the obligations concerning payment specified in Article III of this Agreement.

E. If, upon the award of any contract or the performance of any in-house work for the Study by the Government or the Sponsor, cumulative financial obligations of the Government and the Sponsor would result in excess Study Costs, the Government and the Sponsor agree to defer award of that and all subsequent contracts, and performance of that and all subsequent in-house work, for the Study until the Government and the Sponsor agree to proceed. Should the Government and the Sponsor require time to arrive at a decision, this Agreement will be suspended in accordance with Article X., for a period of not to exceed six months. In the event the Government and the Sponsor have not reached an agreement to proceed by the end of their 6 month period, the Agreement may be subject to termination in accordance with Article X.

F. No Federal funds may be used to meet the Sponsor's share of Study Costs unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute.

G. The award and management of any contract with a third party in furtherance of this Agreement which obligates Federal appropriations shall be exclusively within the control of the Government. The award and management of any contract by the Sponsor with a third party in furtherance of this Agreement which obligates funds of the Sponsor and does not obligate Federal appropriations shall be exclusively within the control of the Sponsor, but shall be subject to applicable Federal laws and regulations.

ARTICLE III - METHOD OF PAYMENT

A. The Government shall maintain current records of contributions provided by the parties, current projections of Study Costs, current projections of each party's share of Study Costs, and current projections of the amount of Study Costs that will result in excess Study Costs. At least quarterly, the Government shall provide the Sponsor a report setting forth this information. As of the effective date of this Agreement, estimated Study Costs are $2,500,000 and the Sponsor's share of estimated Study Costs is $1,250,000. In order to meet the Sponsor's cash payment requirements for its share of estimated Study Costs, the Sponsor must provide a cash contribution currently estimated to be $1,050,000. The dollar amounts set forth in this Article are based upon the Government's best estimates, which reflect the scope of the study described in the PSP, projected costs, price-level changes, and anticipated inflation. Such cost estimates are subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Sponsor.

B. The Sponsor shall provide its cash contribution required under Article II.B. of this Agreement in accordance with the following provisions:

1. For purposes of budget planning, the Government shall notify the Sponsor by August 1st of each year of the estimated funds that will be required from the Sponsor to meet the Sponsor's share of Study Costs for the upcoming fiscal year.

2. No later than 30 calendar days prior to the scheduled date for the Government's issuance of the solicitation for the first contract for the Study or for the Government's anticipated first significant in-house expenditure for the Study, the Government shall notify the Sponsor in writing of the funds the Government determines to be required from the Sponsor to meet its required share of Study Costs for the first fiscal year of the Study. No later than 15 calendar days thereafter, the Sponsor shall provide the Government the full amount of the required funds by delivering a check payable to "FAO, USAED, Wilmington District" to the District Engineer, or verifying to the satisfaction of the Government that the Sponsor has deposited the required funds in an escrow or other account acceptable to the Government, with interest accruing to the Sponsor, or presenting the Government with an irrevocable letter of credit acceptable to the Government for the required funds, or providing an Electronic Funds Transfer of the required funds in accordance with procedures established by the Government.

3. For the second and subsequent fiscal years of the Study, the Government shall, no later than 60 calendar days prior to the beginning of the fiscal year, notify the Sponsor in writing of the funds the Government determines to be required from the Sponsor to meet its required share of Study Costs for that fiscal year, taking into account any temporary divergences identified under Article II.D of this Agreement. No later than 30 calendar days prior to the beginning of the fiscal year, the Sponsor shall make the full amount of the required funds available to the Government through any of the funding mechanisms specified in paragraph B.2. of this Article.

4. The Government shall draw from the funds provided by the Sponsor such sums as the Government deems necessary to cover the Sponsor's share of contractual and in-house fiscal obligations attributable to the Study as they are incurred.

5. In the event the Government determines that the Sponsor must provide additional funds to meet its share of Study Costs, the Government shall so notify the Sponsor in writing. No later than 60 calendar days after receipt of such notice, the Sponsor shall make the full amount of the additional required funds available through any of the funding mechanisms specified in paragraph B.2. of this Article.

C. Within ninety (90) days after the conclusion of the Study Period or termination of this Agreement, the Government shall conduct a final accounting of Study Costs, including disbursements by the Government of Federal funds, cash contributions by the Sponsor, the amount of any excess Study Costs, and credits for the negotiated costs of the Sponsor, and shall furnish the Sponsor with the results of this accounting. Within thirty (30) days thereafter, the Government, subject to the availability of funds, shall reimburse the Sponsor for the excess, if any, of cash contributions and credits given over its required share of Study Costs, other than excess Study Costs, or the Sponsor shall provide the Government any cash contributions required for the Sponsor to meet its required share of Study Costs other than excess Study Costs.

D. The Sponsor shall provide its cash contribution for excess Study Costs as required under Article II.C. of this Agreement by delivering a check payable to "FAO, USAED, Wilmington District" to the District Engineer as follows:

1. After the project that is the subject of this Study has been authorized for construction, no later than the date on which a Project Cooperation Agreement is entered into for the project; or

2. In the event the project that is the subject of this Study is not authorized for construction by a date that is no later than 5 years of the date of the final report of the Chief of Engineers concerning the project, or by a date that is no later than 2 years after the date of the termination of the study, the Sponsor shall pay its share of excess costs on that date (5 years after the date of the Chief of Engineers or 2 year after the date of the termination of the study).

ARTICLE IV - STUDY MANAGEMENT AND COORDINATION

A. To provide for consistent and effective communication, the Sponsor and the Government shall appoint named senior representatives to an Executive Committee. Thereafter, the Executive Committee shall meet regularly until the end of the Study Period.

B. Until the end of the Study Period, the Executive Committee shall generally oversee the Study consistently with the PSP.

C. The Executive Committee may make recommendations that it deems warranted to the District Engineer on matters that it oversees, including suggestions to avoid potential sources of dispute. The Government in good faith shall consider such recommendations. The Government has the discretion to accept, reject, or modify the Executive Committee's recommendations.

D. The Executive Committee shall appoint representatives to serve on a Study Management Team. The Study Management Team shall keep the Executive Committee informed of the progress of the Study and of significant pending issues and actions, and shall prepare periodic reports on the progress of all work items identified in the PSP.

E. The costs of participation in the Executive Committee (including the cost to serve on the Study Management Team) shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

ARTICLE V - DISPUTES

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to both parties. The parties shall each pay 50 percent of any costs for the services provided by such a third party as such costs are incurred. Such costs shall not be included in Study Costs. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE VI - MAINTENANCE OF RECORDS

A. Within 60 days of the effective date of this Agreement, the Government and the Sponsor shall develop procedures for keeping books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this Agreement to the extent and in such detail as will properly reflect total Study Costs. These procedures shall incorporate, and apply as appropriate, the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to state and local governments at 32 C.F.R. Section 33.20. The Government and the Sponsor shall maintain such books, records, documents, and other evidence in accordance with these procedures for a minimum of three years after completion of the Study and resolution of all relevant claims arising therefrom. To the extent permitted under applicable Federal laws and regulations, the Government and the Sponsor shall each allow the other to inspect such books, documents, records, and other evidence.

B. In accordance with 31 U.S.C. Section 7503, the Government may conduct audits in addition to any audit that the Sponsor is required to conduct under the Single Audit Act of 1984, 31 U.S.C. Sections 7501-7507. Any such Government audits shall be conducted in accordance with Government Auditing Standards and the cost principles in OMB Circular No. A-87 and other applicable cost principles and regulations. The costs of Government audits shall be included in total Study Costs and shared in accordance with the provisions of this Agreement.

ARTICLE VII - RELATIONSHIP OF PARTIES

The Government and the Sponsor act in independent capacities in the performance of their respective rights and obligations under this Agreement, and neither is to be considered the officer, agent, or employee of the other.

ARTICLE VIII - OFFICIALS NOT TO BENEFIT

No member of or delegate to the Congress, nor any resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom.

ARTICLE IX - FEDERAL AND STATE LAWS

In the exercise of the Sponsor's rights and obligations under this Agreement, the Sponsor agrees to comply with all applicable Federal and State laws and regulations, including Section 601 of Title VI of the Civil Rights Act of 1964 (Public Law 88-352) and Department of Defense Directive 5500.11 issued pursuant thereto and published in 32 C.F.R. Part 195, as well as Army Regulations 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army".

ARTICLE X - TERMINATION OR SUSPENSION

A. This Agreement shall terminate at the conclusion of the Study Period, and neither the Government nor the Sponsor shall have any further obligations hereunder, except as provided in Article III.C.; provided, that prior to such time and upon thirty (30) days written notice, either party may terminate or suspend this Agreement. In addition, the Government shall terminate this Agreement immediately upon any failure of the parties to agree to extend the study under Article II.E. of this agreement, or upon the failure of the Sponsor to fulfill its obligation under Article III. of this Agreement. In the event that either party elects to terminate this Agreement, both parties shall conclude their activities relating to the Study and proceed to a final accounting in accordance with Article III.C. and III.D. of this Agreement. Upon termination of this Agreement, all data and information generated as part of the Study shall be made available to both parties.

B. Any termination of this Agreement shall not relieve the parties of liability for any obligations previously incurred,
including the costs of closing out or transferring any existing contracts.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the District Engineer for the U.S. Army Corps of Engineers, Wilmington District.

DEPARTMENT OF THE ARMY

BY _____
John E. Pulliam, Jr.
Colonel, U.S. Army
District Commander

DATE: 25 Sep 06

COMMONWEALTH OF VIRGINIA

BY _____
L. Preston Bryant, Jr.
Secretary of Natural Resources
Commonwealth of Virginia

DATE: 9/14/06

CERTIFICATE OF AUTHORITY

I, Roger L. Chaffe, do hereby certify that I am authorized by the principal legal officer of the Commonwealth of Virginia to make this certification; that the Commonwealth of Virginia is a legally constituted public body with full authority and legal capability to perform the terms of the Agreement between the Department of the Army and the Commonwealth of Virginia in connection with a study of the Philpott Dam and Lake; and that the persons who have executed this Agreement on behalf of the Commonwealth of Virginia have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this 19th day of September, 2006.

Roger L. Chaffe
Senior Assistant Attorney General
Commonwealth of Virginia

CERTIFICATION REGARDING LOBBYING

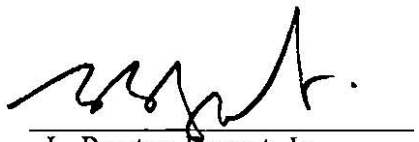
The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.



L. Preston Bryant, Jr.
Secretary of Natural Resources
Commonwealth of Virginia

DATE: 9/14/06

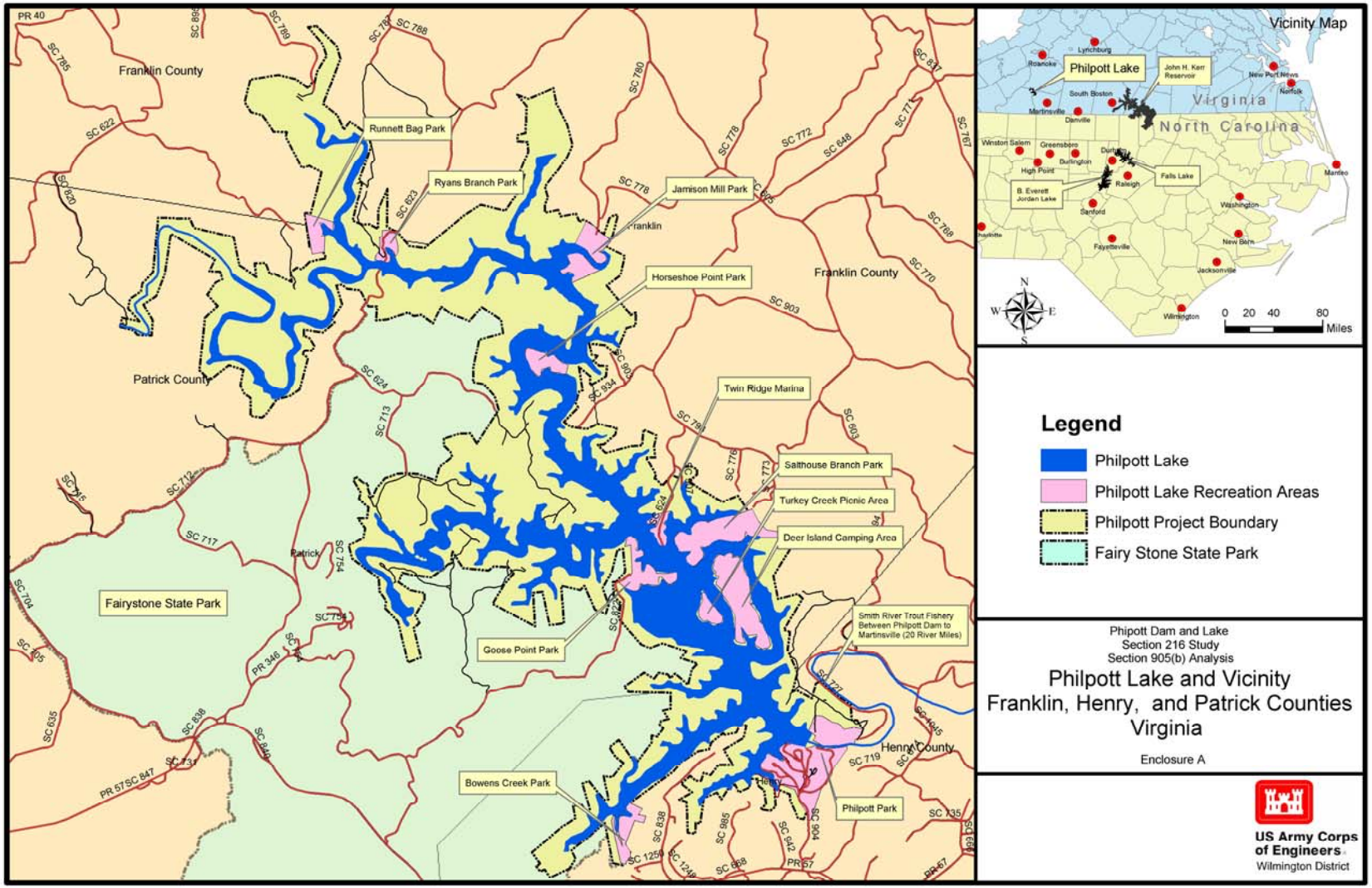
CERTIFICATION OF LEGAL REVIEW

The Feasibility Cost Sharing Agreement For the Philpott Lake, Virginia (Section 216) feasibility study has been fully reviewed by the Office of Counsel, USAED, Wilmington, and is legally sufficient.

Brooke Lamson
District Counsel

DATE: 9/22/06

ATTACHMENT 6
STUDY AREA MAP
PHILPOTT LAKE, VIRGINIA (SECTION 216) STUDY


Franklin County
Patrick County
Runnett Bag Park
Ryans Branch Park
Jamison Mill Park
Horseshoe Point Park
Twin Ridge Marina
Salthouse Branch Park
Turkey Creek Picnic Area
Deer Island Camping Area
Smith River Trout Fishery Between Philpott Dam to Martinsville (20 River Miles)
Goose Point Park
Bowens Creek Park
Philpott Park
Fairystone State Park
Henry County
Vicinity Map
Philpott Lake
John H. Kerr Reservoir
Virginia
North Carolina
Falls Lake
B. Everett Jordan Lake
0 20 40 80
Miles
Legend
Philpott Lake
Philpott Lake Recreation Areas
Philpott Project Boundary
Fairy Stone State Park
Phipott Dam and Lake
Section 216 Study
Section 905(b) Analysis
Philpott Lake and Vicinity
Franklin, Henry, and Patrick Counties
Virginia
Enclosure A
US Army Corps of Engineers
Wilmington District

ATTACHMENT 7: STANDARD OPERATING PROCEDURE
PROJECT DELIVERY TEAM MEETINGS

STANDARD OPERATING PROCEDURE

PROJECT DELIVERY TEAM MEETINGS

1. PURPOSE

The purpose of this procedure is to provide guidelines for conducting effective Project Delivery Team (PDT) meetings. This Standard Operating Procedure (SOP) also provides methods for reporting meeting results to increase awareness of project status and issues both internal and external to the Corps of Engineers. Effective communication throughout our PDT's enables all Team Members to provide relevant solutions for our customers and to better support our Nation.

2. APPLICABILITY

This Standard Operating Procedure (SOP) applies to all Wilmington District Teams and Project Management Business Process (PMBP) products and services.

3. REFERENCES

- ER 5-1-11, *U.S. Army Corps of Engineers Business Process* (HQUSACE)
- U.S. Army Corps of Engineers Wilmington District Operations Plan, *Building Towards a Learning Organization*: People, Process, Customers, and Communication

4. DEFINITIONS

4.1 USACE Communication Principles

- Listen to all constituents, both inside and outside USACE, respecting their viewpoints on issues of concern. Seek opportunities for synergy.
- Communicate early, clearly, completely, honestly, accurately, and often.
- Make communication an integral part of the project management business process.
- Be accessible to all constituents and respond promptly to their concerns without censorship or misinformation.
- Proactively inform the public and stakeholders about the Corps' vital role and special expertise.
- Do what we say we will do.

4.2 Customer

Customer as used in this SOP includes partners and stakeholders - any individual or organization for which USACE delivers projects or services to meet specific needs. The ultimate USACE customer is the American public as stated in ER 5-1-11, *U.S. Army Corps of Engineers Business Process* (HQUSACE). Customers may also be PDT members. They include local sponsors involved in cost-sharing projects.

Timeliness

Timeliness is critical to ensure success of our projects, motivate the PDT, and to satisfy our customers. By promptly executing the activities in this SOP and the PMBP, PDT's deliver the results required to maintain the project schedule and budget, while producing a quality product for the customer.

5. RESPONSIBILITIES

5.1 Project Manager (PM)

- Team leader and primary point of contact throughout life of the project
- Requests team members and alternates through supervisors
- Regularly communicates with customers
- Schedules meetings with adequate notice
- Ensures PDT has agendas and "read ahead" material prior to meetings
- Provides P2 schedule updates at all meetings
- Revises P2 schedules monthly (minimum)
- Keeps team members informed of assignments
- Keeps track of project funds and distributes to team members according to their agreed upon cost estimates
- Lead PDT meetings
- Prepare cost sharing agreements
- Keep the project management plan (PMP) updated
- Track and communicate PDT member action items
- Publish progress reports and milestones
- Prepare accurate and current project reports for monthly Project Review Board (PRB) Meetings

5.2 Technical Lead (TL)

- Work with PM to create agendas and meeting handouts
- Be sure the appropriate USACE technical process is followed
- Work with the PM to lead meetings and facilitate discussions
- Prepare reports (engineering or feasibility reports)

5.3 PDT Members

- Attend all PDT meetings whenever possible and if not available be sure alternate is present
- Complete assignments on time and within budget
- Provide PM with accurate cost estimates (scopes of work) based on the best available knowledge at the time
- Assist the PM with PMP and P2 project schedule updates
- Help TL prepare documents
- Execute according to the current P2 project schedule
- Keep supervisors informed of project status and schedule, including:
  - "Hot issues"
  - Schedule changes and additional funds required
  - Agendas for meetings with customers and stakeholders
  - Meeting minutes for special issue meetings
- Provide PDT with status of assigned activities and tasks
- Promptly notify PDT of pending issues that will affect project performance

5.4 Supervisors

- Assign team members and alternates to projects
- Ensure alternates are available when team members are not
- Keep section informed of issues impacting their section's work
- Assess workload frequently to ensure employee's have adequate time to complete their work
- Communicate regularly with staff sharing "lessons learned" and discussing issues that require resolution
- Assist PDT members with project/program execution
- Review technical scopes of work
- Be aware of PDT member action items and provide support required for timely completion

6. PROCEDURE

6.1 Establishing PDT's

Project managers staff the team to meet the needs of the project considering cost restraints. PM's request team members and alternates through supervisors. Supervisors assign team members and alternates based on experience, expertise, workload, available funds, and project schedule.

6.2 Problem Definition

The PM and TL should review project authorizations and project purposes and confirm that management agrees to the problem being addressed in the project. The PM should ensure that supervisors and assigned team members are aware of the project authorization and what the agreed to problem is. The PM and TL must evaluate all work throughout the life of the project to be sure that it is supported by the project authorization and will lead to feasible project alternatives.

6.3 Scheduling

a. PDT Meetings

The PM schedules meetings as needed and in accordance with funding availability. Normally PDT's will meet monthly prior to the PRB meeting. The PM should schedule meetings through Outlook.

b. Project Schedules

The PM should provide a P2 schedule including milestones, funds available, and funds expended to date, at every meeting to provide team members the opportunity to review project status and provide input. The PM must update the P2 schedules on a regular basis. The first project schedule will be derived from the major tasks and timelines provided by supervisors when the PM first establishes the team. After the first meeting, the milestones and funds required will come from the PDT members through their supervisory chain to the PM for inclusion in the project's P2 schedule and budget. PDT members will share schedule and budget information with their supervisor on a regular basis and keep them informed of project status.

6.4 Framework for PDT Meeting Processes

a. **Prior to the Meeting**

1. PM prepares meeting agenda

- Agenda is provided to PDT for review in advance of meeting
- Agenda should include: name of the group meeting, time, date, location of the meeting, and items to be discussed
- Agenda should be concise, specific, and allow space for meeting participants to take notes
- Directions to the meeting location should be included when required

Note: For recurring PDT meetings (i.e. Navigation and Operations meetings), a standing agenda may be used.

2. PDT members review proposed schedule changes and any uncompleted action items with their supervisors. If possible, resolve any issues prior to the meeting.

3. PM prepares P2 schedule
   - Includes milestones, funds available, and funds expended
   - Provide to PDT in advance of meeting for review

4. PM in conjunction with the PDT determines required team members for meetings
   - PM and TL should be present at all PDT meetings with the exception of special work group meetings
   - Project lawyer should be at all meetings involving legal documents
   - Contracting representatives should be present at any meetings in which contracts will be discussed. Also, when a contract may be used, the project manager should schedule an acquisition planning meeting
   - PDT members ensure that their alternate is available to attend meetings when they cannot and that the alternate has the required information to be prepared

5. PDT assigns note taker
   - Can be any PDT member, but should not be the meeting leader
   - Video taping/tape recording should be set up if meeting will have lengthy discussions on highly technical material out of the note taker's area of expertise (in addition to note taking)
   - Note taker should consider bringing a lap top to the meeting and typing notes directly into a file

6. Subject matter specialists notified that they will be asked to address topics/issues at a meeting so they can adequately prepare

7. PM sends PDT samples of work or other documents that will be referenced during the meetings

8. When appropriate PM sends PDT a “strawman” of a document that will be developed during meeting

9. PDT will maximize use of virtual technology as appropriate. Examples include: video teleconferences, telephone conferences, project websites, PMBP portal, and project list serves.

b. **<u>During the Meeting</u>**

1. PDT establishes ground rules at first meeting. Suggested examples include:
   - Respect each others time (Be on time. End meeting on time.)
   - Come to meetings prepared
   - Be solution oriented
   - Stay focused on the topics being discussed
   - Be open and listen to all viewpoints

2. P2 updates
   - *PDT reviews current P2 schedule to report progress and update*
   - PDT provides an update on the status of their tasks including a report of percent complete and PM provides an update on the funds expended

3. Meeting leader (normally PM) keeps meeting moving
   - Ensures all agenda items are covered adequately
   - Identifies action items, completion dates, and responsible persons
   - Keeps participants focused on the topic being discussed
   - Ensures note taker documents decisions and other pertinent minutes

4. PDT determines the frequency of meetings considering the requirements for each milestone and funds available

c. <u>After the Meeting</u>

PM and Note Taker ensure meeting minutes are distributed promptly to PDT members, supervisors, and interested parties. PDT members update supervisors on meeting results, decisions, issues, and action items.

6.5 Reporting Results of PDT Meetings

Meeting minutes should be prepared and distributed promptly to the PDT for review. Minutes should include: name of the group meeting; time, date, and meeting location; participant list and contact information; meeting agenda; brief summary of discussions and decisions; changes to project schedule and funds; action items with completion dates; who is responsible for each action item; and the time, date, and location for a follow up meeting if one is required. Abbreviated meeting minutes may be used as long as they reflect schedule changes and list action items with responsible person and completion dates. These notes should be distributed to the PDT, supervisors, and interested parties. Meeting minutes including external customers may require an internal review prior to distribution. The PDT should determine when this is advisable. An official file containing PDT meeting minutes should be kept in the project management office for all projects. When appropriate, minutes should be posted on a project website as well.

7. DISTRICT SUBJECT MATTER EXPERT LIST

To assist with staffing PDT's, District employee records are available that display specific skills and professional certifications. This information can be found using two systems, the Automated Training Management System and Army Regional Tools System.

8. RECORD RETENTION

Records produced as a result of this procedure will include:

- Meeting notes and action item log
- Documentation of all formal communications with customers/sponsors
- PMP and project schedules